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AN ESTIMATE OF THE STANDARD OF LIVING IN CHINA

SUMMARY

I. Purpose: bearing on other investigations and an example of real economic pressure, 107. — II. Source of data: investigations made at Tsing Hua College, Peking, China, 108. — III. Limitations: an intensive survey of one district and not necessarily typical of the whole country, 110. — IV. Classes represented: Chinese and Manchu villagers, 112. — V. Tables: five tables classifying incomes, average amount expended for various purposes, per cent expended for various purposes, and sundry other items by expenditure groups, 113. — VI. Analysis of tables, 119. — VII. General conclusions, 122. — VIII. Comparison with other investigations: Engel, Mrs. More, Chapin, and the United States Bureau of Labor, 123. — IX. How it is done: the maintenance of a starvation standard, 124. — X. The cost, 127. — Figure I: a comparison of the extremes of variation in the percentage of expenditure for various purposes between the highest and the lowest income groups in five well known investigations, 123. — Figure II: a comparison of the percentage and average expenditures of 195 Chinese and Manchu families, 126.

I. PURPOSE

Two purposes are in mind in making the present study of family expenditures in a rural suburb of the city of Peking, China. The first is its bearing on other similar investigations made in this and in other countries and on the conclusions reached by Engel¹ in the fifties and modified by more recent students of the problem. The second is to present to the well-fed Oc-

¹ This study of family expenditures and the application of Engel's Law in a little district in North China is but a fragment of a larger study of the Standard of Living in China on which the writer has worked for some three years at Tsing Hua College (the American Indemnity College) in Peking, China, and to complete which he is returning to that place this year. Being but a chapter from a larger work, some phases of the problem will seem inadequately treated but this is because they are being more fully discussed in other connections.

cidental, who thinks he knows by experience what economic pressure is, a picture of real pressure as it exists in the Orient and an example of the limits to which a minimum plane of existence can be pushed.

II. SOURCE OF DATA

The data here presented are gathered from an intensive study of the incomes and expenditures of one hundred and ninety-five Chinese and Manchu families and are supplemented with a study of the expenditures of ninety-three employees at Tsing Hua College. The one hundred and ninety-five families are scattered at random over the entire district surrounding the college which is located some five miles outside the west gate of the city of Peking. While many of them are farmers they are all villagers and come from more than a dozen different villages. The families of the employees studied are scattered over the entire province of Chili in which the city of Peking is located.

The investigation was made by the students of the college under the supervision of the Department of Social Science, a regular part of the course in Political Economy each year being a survey of this sort. It would be difficult to find a more carefully selected group of students than these who are gathered from every province in the country to be prepared for advanced study in America. These future leaders are keenly alert to China's social and economic problems and make, not only careful and efficient but sympathetic investigators, to work with whom has been a joy. From this source and from the work of a paid investigator, the following and other varied material has been accumulating since 1914 when the task was first undertaken. This investigator was a young man with a family who

lived the life of the people in one of the near-by villages. He understood their problems, for the standard of living he was investigating was the standard he was maintaining, but he spoke English and was much more intelligent, having been educated in a Mission College. The assistance of the Tu See, or Military Governor of the district, must also be acknowledged. This gentleman, being convinced of the sincerity of our effort, even went so far as to turn over to us the official records of his Yamen, or office. This consisted mainly of a census of the district made about 1912. It was translated by the students and proved a valuable source of information.

A partial list of the studies made during this time includes — a study of the living conditions in the villages of the district, a study of family budgets, a study of the budgets of servants and their families, a study of how the college servants spend their time, a social survey of the village of Chen Fu, and numerous population studies of the district.

In making this study a complete questionnaire was prepared, which was studied in detail by the students before being taken into the field. Here almost insurmountable difficulties were met but patience and perseverance rewarded us with a small number of reports, the trustworthiness of which we could be reasonably certain of. In order to obtain the one hundred and ninety-five cases here represented more than three hundred families were examined; and of more than two hundred reports of college employees, less than one hundred could be used. The reason for this large percentage of unreliability was the ignorance and suspicion of those investigated. As it was in no case possible for the ignorant villager to make out his own budget or even give very definite answers, and as he would have refused if he had realized what the investigator was about, the

cross-examination method had to be patiently and persistently used. Repeated visits had to be made and the investigator had to fill out his questionnaire from the fragmentary information he secured from time to time. This did not secure statistically exact information, but it did insure uniform and fairly accurate reports, provided the answers were not purposely misleading. That they were in so many cases evidently false and had to be discarded is amply explained by the healthy fear the native of this land of the bitter struggle normally has of any and of all outsiders who may be trying to exploit him. Even the college servants had to be officially assured that we had no ulterior motives in asking these questions.

Three years of experiment and weeding out makes us confident that the cases we have retained are representative and trustworthy. It has been our aim to err on the side of strictness rather than too great leniency. In some cases the evident crookedness of the individual investigated has led us to discard otherwise normal reports. In general, however, the discarded data were either incomplete or were so far from normal in some one or more expenditures as to make them obviously impossible. Here it has been necessary to rely very largely on the judgment of the Chinese investigators in discovering these errors.

III. LIMITATIONS

Only those who have lived in China can sympathize with the investigators in the difficulties encountered in making the present survey. Ignorance, superstition, fear, and even hate have worked against us. We have tried to use strictly scientific methods and to produce statistically correct results but at best we can claim no more for our results than that they are estimates which

we have so carefully studied, checked, and rechecked that we feel very sure of our ground. For this reason we are venturing to present them in statistical form, tho statistical accuracy in the sense that we know it from the studies of Dr. Chapin and Mrs. More has been, from the nature of the case, impossible. We venture also to compare these results with those obtained in Europe and America because they so clearly show the same general tendencies in spite of the tremendous difference in the standards of living.

It must be definitely understood that this is an intensive study of a particular district rather than an extensive study of the whole country. We cannot even be sure that it is a fairly representative plot. It represents the actual living conditions in a little district of less than seven square miles to the northwest of the capital. It is called the First Division of the Western Suburb, and in these few square miles is supported a population of more than eight thousand people. There are eighteen villages, and more than three square miles are occupied by the deserted gardens of princes and the famous, now ruined, palace of Emperor Chen Lung. This give us a density of population scarcely equaled in many of our smaller American cities.

The individual character of the problem is complicated by the fact that the district is largely occupied by the now destitute Manchus who formerly lived here in opulence and ease on the tribute money exacted from the conquered Chinese. Today the Chinese are masters, and all outside income has ceased with the exception of a small pension doled out to them by the deposed imperial family. Their condition in this period of transition and the provision which will have to be made for their future constitute one of China's foremost social problems.

Whether or not these data are typical of the Orient or even of China only time and other similar studies can tell. The Chinese associated with me in the work feel that they are very exceptional and that other parts of the country will make a better showing, but American friends from the south of China are under the impression that that section of the country will register an even severer economic and population pressure.

Therefore we are justified in taking this study only for what it is: a statistical estimate of the standard of living actually obtaining in a small district some five miles outside the capital of the Chinese Republic.

IV. THE CLASSES REPRESENTED

Three distinct classes of people are studied in the following tables only three of which can be combined and these not with entire satisfaction. Their value lies, however, not in our ability to sum them up in one table but the manner in which they complement each other. Each very definitely shows precisely the same main tendencies. As the studies of these classes were made independently and at different times, this constitutes the strongest single proof of their reliability.

The one hundred and ninety-five families in Tables II and III are divided into Chinese and Manchus. The different characteristics of the two peoples, the difference in their standards and morality, and the difference in their industry and source of income, make these two tables of value for purposes of comparison but difficult to combine. We find that within the same expenditure group the relative importance of the same item of expenditure varies greatly. The Chinese have no cases in the lowest expenditure group and the Manchus have no cases in the highest. For this reason

it has seemed best to omit all data in these two groups, in the final table combining the entire one hundred and ninety-five cases.

The families represented have been taken at random from the whole district. They represent farmers, mechanics, tradesmen, day laborers, drivers, carpenters, barbers, and in fact all classes from beggars to gentle folk. No attempt has been made to choose one class or one level. Any case presented, no matter what the class or status, has been retained if trustworthy.¹

The servants (Tables IV and V) represent a class by themselves and are of only supplementary value to the study. They have regular incomes and are furnished with housing and light and fuel. They can get good food (according to their standards) at a minimum cost, and they regularly send a large proportion of their incomes home to their families in case they depend on them for support. Such budgets cannot, of course, be compared with the above general family budgets.²

V. THE TABLES

Table I compares the distribution of Chinese and Manchu incomes. The median in each case falls in the \$90-\$109 group, but the Manchu has a larger number in the lower income groups and the Chinese in the higher.

A still more important fact is that 75 per cent of the income of the Manchu family is derived from the pension and the house which is given with it. Only 13

¹ Approximately one-third of the men represented in the families investigated are men with trades, one-third are farmers, one-sixth are small dealers, and one-sixth are common laborers.

² In another study of the expenditures of college employees they were found to have an average income of \$93.71 of which an average amount of \$39.91 was sent home to their families. Of the families of servants 63 per cent earned by their own efforts less than the amount sent home to them and 31 per cent earned nothing at all.

of the remaining 25 per cent comes directly from an occupation. In the entire district where there are more Chinese than Manchus two hundred and eighty-five Manchus are reported as without occupation as against ninety-one Chinese. The Manchu does not like to work. He has been known to pull up the brick tiles of his floor

TABLE I. A COMPARISON OF THE INCOMES OF CHINESE AND MANCHU FAMILIES

| Income in Chinese Dollars | One Hundred Chinese Families | Ninety-five Manchu Families |
|---------------------------|------------------------------|-----------------------------|
| 30- 49 | 0 | 9 |
| 50- 69 | 11 | 15 |
| 70- 89 | 14 | 21 |
| 90-109 | 26 | 24 |
| 110-129 | 15 | 12 |
| 130-149 | 13 | 11 |
| 150-169 | 8 | 3 |
| 170-189 | 2 | 0 |
| 190-209 | 5 | 0 |
| 210-229 | 2 | 0 |
| 230-249 | 3 | 0 |
| 250-269 | 1 | 0 |

and sell them first. In one village of some forty families three-quarters of the homes were thrown open to the soldiers of the near-by barracks and a thriving business in prostitution was done. Children are an economic asset. This is a striking indication of the Manchu problem. The Chinese living and working in the same district have no pension and yet are in much better economic condition and live happier and more useful lives.

A comparison of the distribution of expenditures (see Table II) shows the same tendency. For Chinese the median expenditure group is \$90-\$109 while for Manchus it is \$70-\$89.

Tables II and III show respectively the percentage and the average expenditures for various purposes of one hundred and ninety-five Chinese and Manchu families. For purposes of comparison the one hundred Chinese and the ninety-five Manchu families are treated both separately and collectively. In addition the average income, average expenditure, average surplus and deficit, and average size of the family are shown for each group.

Correlation is according to expenditure rather than income. Seven \$20 classes are used, beginning at \$30 and ending with \$150 or over. Reducing this to American money the range would be from \$15 to \$75 and over. Investigations made in this country generally use a range of from \$200 to \$1500. A comparison of the two shows a gulf which cannot be accounted for by the greater purchasing power of the dollar in China nor yet by the fact that most American investigations have been made among city dwellers while this is a rural community. Making allowance for every difference of this sort we still have a discrepancy for which it is possible to account only by the great difference in the standard of living.

In none of these tables has the attempt been made to reduce Chinese to American money owing to the constantly fluctuating exchange between the two countries and the difference between the *real* value of the two dollars. The writer has seen the American dollar fluctuate more than one hundred points in value in the space of a single year in China. For the five years ending January, 1916, the average value of the American dollar in Chinese dollars was a fraction less than \$2.25. In general, however, where the actual exchange of money is not concerned, it is customary to figure on an exchange of two for one.

TABLE II. EXPENDITURES OF ONE HUNDRED AND NINETY-FIVE CHINESE AND MANCHU FAMILIES

| Expenditure Groups by \$20 Classes | Size of Family | No. of Cases | Per cent Deficit or Surplus of Total Income | Per cent Total Expenditure of Total Income | Per cent of Total Expenditure | | | | |
|--|----------------|--------------|---|--|-------------------------------|----------|----------------|------|---------------|
| | | | | | Food | Clothing | Light and Fuel | Rent | Miscellaneous |
| ONE HUNDRED CHINESE FAMILIES | | | | | | | | | |
| \$30-\$49 | 2.5 | 11 | .. | 100.0 | 76.9 | 5.1 | 7.6 | 9.0 | 1.4 |
| 50-69 | 3.2 | 14 | 2.3 | 97.7 | 80.3 | 4.3 | 5.6 | 7.9 | 1.9 |
| 70-89 | 4.2 | 32 | 2.2 | 97.8 | 78.0 | 5.9 | 5.8 | 8.0 | 2.2 |
| 90-109 | 4.3 | 12 | 1.7 | 98.3 | 72.7 | 9.0 | 7.5 | 7.6 | 3.1 |
| 110-129 | 4.5 | 14 | 3.8 | 96.2 | 72.4 | 8.9 | 7.3 | 7.3 | 4.1 |
| 130-149 | 4.5 | 14 | 2.4 | 97.6 | 72.0 | 9.8 | 5.7 | 6.8 | 5.6 |
| 150 Over | 5.0 | 17 | | | | | | | |
| NINETY-FIVE MANCHU FAMILIES | | | | | | | | | |
| \$30-\$49 | 2.5 | 8 | - 4.5 | 104.5 | 82.0 | .6 | 4.5 | 13.0 | .. |
| 50-69 | 4.5 | 9 | - 3.7 | 103.7 | 82.0 | 1.3 | 4.1 | 11.2 | 1.3 |
| 70-89 | 4.4 | 30 | - 2.5 | 102.5 | 77.0 | 4.4 | 4.9 | 10.2 | 3.5 |
| 90-109 | 4.8 | 26 | 2.3 | 97.7 | 72.5 | 8.8 | 7.0 | 8.5 | 6.2 |
| 110-129 | 4.1 | 12 | 6.6 | 93.4 | 68.6 | 5.5 | 6.9 | 7.2 | 8.8 |
| 130-149 | 6.1 | 10 | 1.2 | 98.8 | 68.5 | 7.9 | 6.7 | 7.0 | 9.9 |
| 150 Over | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| TOTAL OF ONE HUNDRED AND NINETY-FIVE CHINESE AND MANCHU FAMILIES | | | | | | | | | |
| \$30-\$49 | 2.5 | 8 | 4.0 | 104.0 | 79.0 | 3.4 | 6.0 | 9.9 | 1.3 |
| 50-69 | 3.4 | 20 | 1.5 | 101.5 | 77.9 | 4.4 | 5.1 | 9.4 | 3.0 |
| 70-89 | 4.0 | 44 | .8 | 100.8 | 75.2 | 5.6 | 6.3 | 8.4 | 4.0 |
| 90-109 | 4.4 | 58 | 2.8 | 97.2 | 70.5 | 8.7 | 7.2 | 7.5 | 5.9 |
| 110-129 | 4.2 | 24 | 4.0 | 96.0 | 70.8 | 8.5 | 7.0 | 7.1 | 6.6 |
| 130-149 | 5.1 | 24 | 3.0 | 97.0 | .. | .. | .. | .. | .. |
| 150 Over | 5.0 | 17 | 2.4 | 97.6 | .. | .. | .. | .. | .. |

TABLE III. AVERAGE EXPENDITURES OF ONE HUNDRED AND NINETY-FIVE CHINESE AND MANCHU FAMILIES

| Expenditure Groups by \$20 Classes | Average Total Income | Average Deficit or Surplus | Average Total Expenditure | Average Expenditure for | | | | |
|--|----------------------------|----------------------------------|---------------------------------|-------------------------|----------|-------------------|-------|---------------|
| | | | | Food | Clothing | Light and Fuel | Rent | Miscellaneous |
| ONE HUNDRED CHINESE FAMILIES | | | | | | | | |
| \$30-\$49 | \$59.0 | .... | \$59.0 | \$45.3 | \$3.0 | \$4.5 | \$5.3 | ..8 |
| 50-69 | 78.5 | \$1.8 | 76.7 | 61.5 | 3.3 | 4.3 | 6.1 | 1.5 |
| 70-89 | 100.2 | 3.2 | 97.0 | 75.7 | 5.7 | 5.6 | 7.8 | 2.1 |
| 90-109 | 119.8 | 2.1 | 117.7 | 85.6 | 10.6 | 8.8 | 9.0 | 3.7 |
| 110-129 | 138.8 | 5.3 | 133.8 | 96.9 | 12.0 | 9.8 | 9.8 | 5.5 |
| 130-149 | 188.8 | 4.5 | 184.1 | 132.4 | 18.0 | 10.5 | 12.4 | 10.2 |
| 150 Over | | | | | | | | |
| NINETY-FIVE MANCHU FAMILIES | | | | | | | | |
| \$30-\$49 | \$40.1 | -\$1.6 | \$41.8 | \$34.2 | \$.3 | \$1.9 | \$5.4 | ..8 |
| 50-69 | 57.6 | - 2.2 | 59.8 | 49.1 | .8 | 2.4 | 6.6 | 2.7 |
| 70-89 | 74.8 | - 1.8 | 76.6 | 58.9 | 3.4 | 3.8 | 7.8 | 6.1 |
| 90-109 | 101.5 | 2.4 | 99.1 | 71.8 | 5.5 | 6.9 | 8.7 | 10.4 |
| 110-129 | 126.2 | 8.0 | 118.2 | 81.1 | 10.0 | 8.1 | 8.5 | 13.6 |
| 130-149 | 139.5 | 1.7 | 137.8 | 94.5 | 10.9 | 9.2 | 9.6 | .... |
| 150 Over | .... | .... | .... | .... | .... | .... | .... | .... |
| TOTAL OF ONE HUNDRED AND NINETY-FIVE CHINESE AND MANCHU FAMILIES | | | | | | | | |
| \$30-\$49 | \$40.1 | -\$1.6 | \$41.8 | \$47.0 | \$2.0 | \$3.6 | \$5.9 | ..8 |
| 50-69 | 58.5 | - .9 | 59.4 | 59.7 | 3.4 | 3.9 | 7.2 | 2.3 |
| 70-89 | 76.0 | - .6 | 76.6 | 74.0 | 5.5 | 6.2 | 8.2 | 3.9 |
| 90-109 | 100.8 | 2.8 | 97.9 | 79.9 | 10.3 | 8.5 | 8.8 | 7.0 |
| 110-129 | 123.0 | 5.0 | 118.0 | 83.3 | 11.5 | 9.5 | 9.7 | 8.9 |
| 130-149 | 139.7 | 4.2 | 135.5 | 95.5 | .... | .... | .... | .... |
| 150 Over | 188.8 | 4.5 | 184.1 | .... | .... | .... | .... | .... |

Expenditures are classified under the usual five heads — food, clothing, light and fuel, rent, and miscellaneous. Under the first four are included all subsistence wants while under the last must be included that indefinite, always growing, ever insistent class of needs amongst which are education, books, travel, recreation, social obligations, medical attendance, insurance, spending

TABLE IV. EXPENDITURES OF NINETY-THREE SERVANTS

| Expenditure Groups by \$20 Classes | No. of Cases | % of Total sent Home | % of Total spent on Self | Per cent of Total Expenditure on Self for | | | |
|------------------------------------|--------------|----------------------|--------------------------|---|----------|-------------------|---------------|
| | | | | Food | Clothing | Other Necessities | Miscellaneous |
| \$30-\$49 | 7 | 4.5 | 95.5 | 84.7 | 13.2 | 1.4 | .7 |
| 50- 69 | 13 | 25.0 | 75.0 | 76.0 | 19.8 | 2.0 | 1.2 |
| 70- 89 | 12 | 36.0 | 64.0 | 70.0 | 22.2 | 3.0 | 2.5 |
| 90-109 | 51 | 47.0 | 53.0 | 69.5 | 18.5 | 8.7 | 3.6 |
| 110-129 | 10 | 53.5 | 46.5 | 63.0 | 21.0 | 10.8 | 6.1 |
| 130-149 | .. | .. | .. | .. | .. | .. | .. |
| 150 Over | .. | .. | .. | .. | .. | .. | .. |

money, et cetera. It is a nice little problem to estimate what per cent of the total expenditure can be devoted to each of the above when less than a dollar a year is available for miscellaneous expenditures. The results here shown make it evident that the standard of living is to be measured not by the per cent of the income spent for food but by the per cent remaining for these miscellaneous purposes after the mere subsistence wants have been satisfied. In neither Mrs. More's nor Dr. Chapin's studies do we find the per cent of expenditure for food decreasing regularly as the income increases. The irregularity in the case of Dr. Chapin's study is hard to explain. In neither of the above two cases would it be possible to use this per cent as an index.

In Tables IV and V the expenditures for servants are presented in the same general manner as for Chinese

and Manchu families in Tables II and III. Owing to the different conditions obtaining, as indicated above, the purposes of expenditure are slightly different. The general expenditure is divided into the amount sent home and the amount spent on self. Expenditures on self are divided into food, clothing, other necessities, and luxuries. The same expenditure groups are used.

TABLE V. AVERAGE EXPENDITURES OF NINETY-THREE SERVANTS

| Expenditure Groups by \$20 Classes | Average Total Income | Average Am't sent Home | Spent on Self | | | | |
|------------------------------------|----------------------|------------------------|---------------|--------|----------|-------------------|---------------|
| | | | Total | Food | Clothing | Other Necessities | Miscellaneous |
| \$30-\$49 | \$44.5 | \$.3 | \$42.5 | \$36.0 | \$5.5 | \$.6 | \$.3 |
| 50- 69 | 61.0 | 15.5 | 45.5 | 35.0 | 9.0 | .9 | .5 |
| 70- 89 | 81.0 | 29.0 | 52.0 | 36.5 | 11.6 | 1.6 | 1.3 |
| 90-109 | 99.0 | 46.0 | 53.0 | 36.7 | 9.8 | 4.6 | 1.9 |
| 110-129 | 117.5 | 63.3 | 54.2 | 34.0 | 11.2 | 5.5 | 3.3 |
| 130-149 | .. | .. | .. | .. | .. | .. | .. |
| 150 Over | .. | .. | .. | .. | .. | .. | .. |

VI. ANALYSIS OF TABLES

Surplus and deficit. All Manchu families show a deficit till an expenditure of \$90 is reached. The record for Chinese is much better, as in even the lowest expenditure group there is no deficit and at \$70 they begin to save. Deficits go as high as 4 per cent and, omitting one group which is very exceptional, the surplus attains the same per cent.

Food. The average expenditure for food increases as the general expenditure increases, but not proportionally, for the per cent decreases. This is regularly demonstrated by the Manchus and Chinese, separately and together, and by the servants. The per cent expended for food varies from a maximum of 83 per cent for Manchus in the lowest expenditure group to a minimum of 68 per cent for the same people in their

highest expenditure group. The minimum average expenditure is \$34.20 per year for an average family of 2.5 Manchus, and the maximum is an average of \$132.40 for a family of 4.5 Chinese. The average expenditure for food for servants remains in all groups very close to \$36 which is the regular cost of board for servants at the school.

The interesting thing to note here is that we have a wider range of variation among the Manchus than among the Chinese in the per cent spent on food. The reason is that the thrifty Chinese are less willing to cut down on food for the sake of luxuries than are their former masters, the Manchus. This tendency we shall see again.

Clothing. In every case the average amount and the per cent spent for clothing show a marked tendency to increase. The per cent spent on clothing varies from .7 per cent to 9.8 per cent and the average amount varies from \$.30 to \$18. The Chinese spend both a larger per cent and a larger average amount than do the Manchus on this item. Here is another place where the Manchus can cut down in order to get the luxuries he once was used to. The servants, due to the character of their work spend a relatively large amount on clothing.

Light and fuel. The average amount spent on light and fuel shows a marked tendency to increase and the per cent shows a slight tendency in the same direction. In other investigations the per cent for this item either decreases or remains the same. The reason for this difference lies in the fact that, until an expenditure of \$90 is reached for both Chinese and Manchus, the family cannot spend a sufficient amount for this purpose and has to make up by gathering fuel from the fields. Six dollars is the minimum amount with which a family can do, and to spend more than \$10 means luxury. A

quarter of the Chinese and nearly half of the Manchus spend less than \$5 for light and fuel. For servants these things are furnished.

Rent. Rent in this district is comparatively low. It ranges from \$5 to \$12 per year, and amounts to from 5 per cent to 12 per cent of the total expenditure. The best house in the district can be rented for \$15 and would be fairly comfortable as a shelter for stock.

Servants are housed at the college.

Miscellaneous. The average amount available for miscellaneous expenditures ranges from nothing for Manchu families of the lowest class to a maximum of \$13.60 for the same people in their highest class. The range for Chinese is much more modest. Their lowest class has \$1.40 and their highest has \$5.60. We have already seen the reason for this lies in the willingness of the Manchu to cut down on necessities in order to save for this item.

Luxuries combined with "other necessities" for servants show them to spend a larger proportion of their incomes for this purpose than the above families do. Probably coming in contact with a higher standard of living in their work is responsible for this.

Average amount sent home. Among the servants the big item is the amount sent home to the families dependent on them. The average amount spent on self varies from \$42.50 to \$55, but the average amount sent home varies from less than \$1.00 to \$63.30. Living among them has been largely standardized, which accounts for this large surplus.

VII. GENERAL CONCLUSIONS

Four general conclusions may be reached from the study of the foregoing tables.

1. As the general expenditure increases, the average size of the family is larger.

2. As the general expenditure increases, the average amount spent for food and for rent increases but the per cent shows a regular and definite tendency to decrease.

3. As the general expenditure increases, both the average amount and the per cent spent for clothing and miscellaneous items show a regular and a definite tendency to increase.

4. As the general expenditure increases, the average amount spent for light and fuel increases perceptibly but the per cent shows only a slight tendency in the same direction.

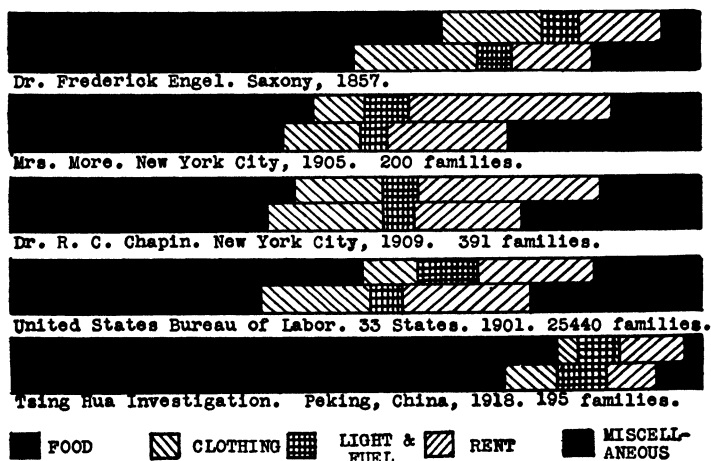
The above conclusions vary from those reached by Engel in the same manner that the American investigations have varied. They hold for food and luxuries (miscellaneous) but not for the rest. As in America the per cent spent for clothing increases and the per cent spent for rent decreases. In China, however, the per cent spent on light and fuel shows a slight tendency to increase while in America it decreases. This is explained by the fact already mentioned that many families in the survey gather from the fields half the fuel they consume, and some of them, most of it. This accounts for the rapid increase in the average expenditure for light and fuel as the family income becomes large enough to relieve the family of this burden.

VIII. COMPARISON WITH OTHER INVESTIGATIONS

Figure I is a comparison of our investigation with four other investigations of the subject. The purpose of the

FIGURE I

A COMPARISON OF THE EXTREMES OF VARIATION IN THE PERCENTAGE OF EXPENDITURE FOR VARIOUS PURPOSES BETWEEN THE HIGHEST AND THE LOWEST INCOME GROUPS IN FIVE INVESTIGATIONS¹



1

THE EXPENDITURES IN FIVE INVESTIGATIONS

| Investigation | Income Groups A — Lowest B — Highest | Per cent of Total Expenditure | | | | |
|---------------------------|--|-------------------------------|----------|----------------|------|---------------|
| | | Food | Clothing | Light and Fuel | Rent | Miscellaneous |
| Engel A | \$225- 300 | 62.0 | 16.0 | 5.0 | 12.0 | 5.0 |
| B | 750-1000 | 50.0 | 18.0 | 5.0 | 12.0 | 15.0 |
| Mrs. More A | 200- 400 | 44.2 | 7.3 | 6.5 | 30.5 | 11.5 |
| B | 1200-1500 | 39.5 | 11.3 | 4.5 | 18.0 | 26.7 |
| Dr. Chapin A | 400- 499 | 40.8 | 13.0 | 5.6 | 26.8 | 14.8 |
| B | 1500-1599 | 36.8 | 16.8 | 4.1 | 16.3 | 26.0 |
| U. S. B. of L A | Under 200 | 50.9 | 8.7 | 7.9 | 16.9 | 15.6 |
| B | 1200 Over | 36.5 | 15.7 | 5.0 | 17.4 | 25.4 |
| Tsing Hua A | 30- 49(a) | 79.0 | 3.4 | 6.0 | 9.9 | 1.3 |
| B | 130- 149 | 70.8 | 8.5 | 7.0 | 7.1 | 6.6 |

(a) Chinese dollars. Exchange value fluctuates greatly but is normally about \$.50.

comparison is to show the range of variation within and between them. In each case the lowest and the highest income groups are contrasted. The three American studies do not vary greatly. In general, the three belong to the same class and show the same general characteristics. Engel's study varies mainly in that a larger per cent is spent for food and a smaller per cent remains for miscellaneous expenditures. A similar study made in Massachusetts in 1885 shows the same characteristic, with 64 per cent spent for food in the lowest income group. If it were possible to push this investigation far enough back we should find the per cent spent on necessities constantly increasing and the per cent left as a margin for luxuries constantly decreasing.

Now compare the Tsing Hua results with those obtaining above. In every case the best record obtained for China is poorer than the poorest recorded in the other four, even Engel's study made in Prussia more than fifty years ago and the one made here in 1885. The per cent spent on food alone is almost as much as the entire per cent spent on all existence wants in the American cases. The maximum per cent remaining for miscellaneous expenditures in China is 6.6 per cent while, in America the lowest is nearly twice that amount. Many of the families in our investigation reported that the mere buying of the most pressing necessities of life thrust them into debt.

The comparison in this figure shows vividly what is meant by a minimum plane of existence.

IX. HOW IT IS DONE


















In America a family which spends half its income on food and has less than one-fifth of it left for miscellaneous expenditures is thought to be in a very bad way,

but this is better than the best that our present study can show. In the investigation we have individual cases where as high as 90 per cent is spent for food and a larger number in which tea and meat, if they could be afforded at all, would come under the head of luxuries. How does a family of 2.5 feed itself on even 83 per cent of an income of \$40 per year. The answer is that two meals of corn bread and salted turnips per day with plenty of good hot water to help it down would cost very little in America and costs much less than half as much in China. I must add, however, that, low as the standard is, I have never seen any evidence of the eating of dog flesh, rats, or any food of that sort.

The same family spends the sum of thirty cents per year on clothing. Of course this is fictitious accuracy but it shows very well the condition to which they are reduced. The acquisition of clothing is purely a matter of happy accident. In summer their clothing, tho dirty, is comfortable for it is well ventilated. In winter they suffer. Cotton is worn, single in summer and thickly padded in winter. Plenty of it is comfortably warm but people of the lowest groups have but a single suit, the cotton wadding being taken out when it is warm and replaced when the cold weather comes on.

If it takes \$6 to keep a family from freezing to death in this cold North China climate, and if half the families spend less, where does fuel come from? This is answered any day during the fall and winter by the swarms of old women and children who infest the fields and highway picking up sticks, throwing clubs into the branches to break off twigs, gathering stubble from the fields, and even collecting the dry grass and leaves with a bamboo rake and basket. We have a saying in China that the whole country is raked with a fine toothed comb each year.

FIGURE II

| A COMPARISON OF THE PERCENTAGE AND AVERAGE EXPENDITURES OF 195 CHINESE AND MANCHU FAMILIES | | | |
|---|--|-----------------------|--|
| SURPLUS.  | AVERAGE TOTAL EXPENDITURE  | EXPENDITURE GROUPS | PER CENT OF TOTAL EXPENDITURE FOR NECESSITIES  MISCELLANEOUS  |
| \$150. \$125. \$100. \$75. \$50. \$25. | | | 10 20 30 40 50 60 70 80 90 100 |
| Av. Deficit \$.8 |  | \$ 50.-\$69. |  |
| Av. Def. \$.6 |  | 70.- 89. |  |
|  |  | 90.-109. |  |
|  |  | 110.-129. |  |
|  |  | 130.-149. |  |

How can rents be so low ? What sort of a house can one rent for \$10 per year ? Well, dirt floors are not expensive, thatch lasts a long time and, even if it does leak, rain does not always fall, and modern sanitary conveniences such as a screen of reeds, a hole in the ground, and an open gutter running to a hole in the wall and emptying into the road are not hard to install.

Now what does this family do for education, books, travel, recreation, social obligations, et cetera ? What insurance do they carry and how much is laid aside for the rainy day ? What would happen if sickness came ? These questions are unanswered for us as they are for the native of this district. If sickness comes it means suffering and perhaps death. If the rainy day comes it means suffering and perhaps the same end. They can have all the luxuries, advantages, and insurance that from nothing to \$15 per year can offer.

X. WHAT IS THE COST ?

From the study of a large number of cases it appears that a family of five can live in comparative comfort (according to local standards) on \$100 per year. This means that they can have enough food, tho simple and poor, live in a house which will at least shelter them from the elements, have at least two suits of clothes, have enough fuel so that they do not have to go out and gather it, and have five dollars left over for miscellaneous expenses which will give them meat on feast days and tea quite often, almost every week; while if there is no sickness, they may even make a trip to the temple fair back in the mountains.

What a picture of the struggle for existence! These people do get along, and the above family is happy and will consider itself fortunate to come out so well; but

what is the price they pay ? Among people of this class life presents such a hard front that the struggle for existence cripples intellectual and spiritual growth even as it does physical development. Healthy virile amusements as the Westerner knows them are conspicuous for their absence. Efficiency and intellectual alertness are at the minimum and nervous reactions are slow. There is no surplus of energy because it is all used up in meeting the hard conditions which make mere survival a difficult matter. Ignorance, over-reproduction, congestion, low position of woman, lack of sanitation, epidemics, and a tremendous loss of " potential ability " — this is the price they pay.

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